**Melting Ice Caps**

**What are ice caps?**

* An ice cap is a thick layer of ice and snow. It covers less that 50,000 square kilometer. If it covered more it would be called an ice sheet.

**What are melting ice caps?**

* Melting ice caps are large pieces of ice that are melting due to the climate change on earth.
* The ice caps are melting due to the rise of the temperature, causing parts of the ice caps to break off and fall into the oceans.
* These melting ice caps are causing ocean levels to and rise and flooding in cities all around the world.

**Main Causes for Melting Ice Caps**

* Polar ice caps are melting because of the excessive amount of greenhouse gases in the atmosphere.
* When humans burn fossil fuels, the fossil fuels go up into the atmosphere. The gases in the atmosphere get trapped and produce heat.
* Solar energy is absorbed by the atmosphere, increasing the temperature on earth and melting the ice caps at an astounding rate.

**More Causes!**

* Scientists have noticed that the burning of coal, gas and oil, are a large part of why the ice caps are melting.
* Between 1906 and 2005, the average temperature of the Earth’s surface has increased by three-fourth of a degree.
* Up until 1850 the temperature appears to have been mostly stable. As the sea levels increase so does the data showing the temperatures rising. The temperatures in the oceans also seem to be rising as the temperature on Earth rises.

**Even More Causes!!**

* Most of the causes of melting ice caps are because of pollution.
* Increase of carbon dioxide into the atmosphere is a cause.
* Venus is the hottest planet in the solar system. It is atmosphere is mostly carbon dioxide.

**Impact of melting ice caps**

* As seawater reaches farther inland, it can cause erosion, flooding of wetlands, contamination of aquifer and agricultural soil, and lost of habitats for fish, birds and plants.
* The main impacts of melting ice caps are ocean levels rising. Ice caps are melting all over the world and ocean levels are rising at an unseen rate.
* One theory is that rising temperatures cause more ice to break off from these glaciers and fall into the ocean, which displaces water, which could cause sea levels to rise significantly. But this theory can’t account for the massive amount of change in Earth’s sea level.
* Another organization, the international Panel on Climate Change, estimated in their report that the oceans could rise 90 centimeters by the year 2100. Which could have a large effect on cities that are near oceans, especially during storms.

**Floods**

* Even moderate ice caps melting will cause flooding. A very small increase will have devastating effect on coastal habitats.
* The melting of mountain glaciers is causing the sea levels to continue to rise. The consequence of this is the loss of coastal wetland and barrier islands, and a much greater risk of flooding in coastal communities.
* Areas such as the Gulf of Mexico and Chesapeake Bay are especially vulnerable.

**Facts!!**

* Antarctica is covered in a sheet of ice about 2,133 meters. If this were all to suddenly melt then, ocean levels would rise about 200 feet.
* There is an ice cap on Mars but it is not made of pure ice water, but instead made of carbons dioxide and ice water.
* The biggest iceberg ever broke free from the Ross Ice Shelf in Antarctic in 2000.

**More Facts!!**

* The Antarctic ice cap has 29 million cubic kilometers of ice, which is 90% of all ice on the plant and is 65% of all the world’s fresh water.
* Only 0.4% of Antarctica is not covered by ice.

**Bibliography**

* "Global Warming Puts the Arctic on Thin Ice." Arctic Sea Ice. Natural Resource Defence Council, 22 Nov. 2005. Web. 18 Nov. 2014. <http://www.nrdc.org/globalwarming/qthinice.asp>.
* Brain, Marshall. HowStuffWorks. HowStuffWorks.com, n.d. Web. 18 Nov. 2014. <http://science.howstuffworks.com/environmental/earth/geophysics/question473.htm>.
* Quaile, Irene. "Polar Ice Sheets Melting Faster than Ever | Environment | DW.DE | 04.02.2013." DW.DE. Deutsche Welle, 04 Feb. 2013. Web. 20 Nov. 2014. <http://www.dw.de/polar-ice-sheets-melting-faster-than-ever/a-16432199>.
* Friedl, Sarah. "Polar Ice Caps: Temperature, Melting Effect & Facts." *Educational Portal*. N.p., n.d. Web. 21 Nov. 2014. <http://education-portal.com/academy/lesson/polar-ice-caps-temperature-melting-effects-facts.html#lesson>.